

### **Amendments to the Specification**

Please replace paragraphs 0009, 0012, 0019, 0020 (Table 2) and 0021 (Table 2) as identified in the published application with the following amended paragraphs:

**[0009]** While not desiring to be bound to any specific theory, we conclude that one or more of the several types of calcium-permeable CNS ion channels mentioned below can be involved in controlling such migration, including: a) the various aspects of the NMDA (N-methyl-D-aspartate) receptor channel complex; b) the voltage-dependent  $\text{Ca}^{2+}$  channels; and c) other channels directly coupled to glutamate (or excitatory amino acid) receptors. Such channels are reviewed in: Sommer, B. and Seeburg, P. H. "Glutamate receptor channels: novel properties and new clones" Trends Pharmacological Sciences 13:291-296 (1992); Nakanishi, S., "Molecular Diversity of glutamate receptors and implications for brain function", Science 248:597-603 (1992).

**[0012]** Other compounds that are useful in the invention include voltage-dependent calcium channel antagonists, e.g. those which exert a substantial direct effect on glutamate toxicity mediated by the L-type voltage dependent  $\text{Ca}^{2+}$  channel in that they produce a statistically significant result in experiments measuring glutamate induced effects by the general method described in Karschian and Lipton, J. Physiol. 418:379-396 (1989) or by other techniques for measuring antagonism of the L-type  $\text{Ca}^{2+}$  channel known to those in the art. (We contrast the direct effect so measured with the secondary effects of excitotoxicity mediated by other channels, which in turn causes flow through the voltage dependent  $\text{Ca}^{2+}$  channels.) Particular candidate compounds include Class I voltage dependent  $\text{Ca}^{2+}$  channel antagonists, e.g., phenylalkylamines.

**[0019]** Table 1, below, lists various suitable NMDA and non-NMDA receptors which do not operate via the voltage-dependent  $\text{Ca}^{2+}$  ion channel. Tables 2-4 list antagonists of the voltage dependent  $\text{Ca}^{2+}$  channel, which can be used by themselves in connection with the first aspect of the invention, and which can also be used in combination with other antagonists in the second aspect of the invention.

[0020]

TABLE 2

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Antagonists of the Voltage Dependent Calcium Channels  
 (N, L, T, P and other types)

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dihydropyridines  
 (e.g., nimodipine)  
 phenylalkylamines  
 (e.g., verapamil, (S)-emopamil, D-600, D-888)  
 benzothiazepines  
 (e.g., diltiazem and others)  
 bepridil and related drugs  
 diphenylbutylpiperdines  
 diphenylpiperazines  
 (e.g., flunarizine/cinnarizine series)  
 HOE 166 and related drugs  
 fluspirilene and related drugs  
 toxins and natural compounds  
 (e.g., snail toxins -- ~~omega~~-~~omega~~-conotoxin GVIA and  
 GVIIA, maitotoxin, taicatoxin, tetrandine, hololena  
 toxin, plectreury's toxin, funnel-web spider venom and  
 its toxin fraction, agatoxins including ~~omega~~-~~omega~~-  
 agatoxin IIIA and ~~omega~~-~~omega~~-agatoxin IVA.

[0021]

TABLE 2

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Antagonists of the Voltage Dependent Calcium Channels  
 (N, L, T, P and other types)

---

dihydropyridines  
 (e.g., nimodipine)  
 phenylalkylamines  
 (e.g., verapamil, (S)-emopamil, D-600, D-888)

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benzothiazepines  
 (e.g., diltiazem and others)  
 bepridil and related drugs  
 diphenylbutylpiperdines  
 diphenylpiperazines  
 (e.g., flunarizine/cinnarizine series)  
 HOE-166 and related drugs  
 fluspirilene and related drugs  
 toxins and natural compounds  
 (e.g., snail toxins — omega-conotoxin GVIA and  
 GVIIA, maitotoxin, taicatoxin, tetrandine, hololena  
 toxin, plectreuryx toxin, funnel-web spider venom and  
 its toxin fraction, agatoxins including omega-  
 agatoxin IIIA and omega-agatoxin IVA.

TABLE 3

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Dihydropropyridine Calcium Channel Antagonists

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<u>nifedipine</u>	<u>KW3049</u>
<u>niludipine</u>	<u>oxodipine</u>
<u>PY108-068 (darodipine)</u>	<u>CD349</u>
<u>mesudipine</u>	<u>TC81</u>
<u>GX1048</u>	<u>YM-09730-5 or (4S)DHP</u>
<u>floridine</u>	<u>MDL72567</u>
<u>nitrendipine</u>	<u>Ro18-3981</u>
<u>nisoldipine</u>	<u>DHP-218</u>
<u>nimodipine</u>	<u>nilvadipine</u>
<u>nicardipine</u>	<u>amlodipine</u>
<u>felodipine</u>	<u>8363-S</u>
<u>PN200-110 (Isradipine)</u>	<u>iodipine</u>
<u>CV4093</u>	<u>azidopine</u>